Dell™ 2161DS-2/4161DS Console Switch

Installer/User's Guide

USA Notification

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Canadian Notification

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

Japanese Approvals

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Safety and EMC Approvals and Markings

UL, FCC, cUL, ICES, CE, N, GS, IRAM, GOST, VCCI, MIC, C-Tick, PSB

Model 2161DS-2/4161DS Console Switch July 2005

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Safety Precautions

Use the following safety guidelines to help ensure your own personal safety and to help protect your system and working environment from potential damage.

⚠ **CAUTION: The power supplies in your system may produce high voltages and energy hazards, which can cause bodily harm. Only trained service technicians are authorized to remove the covers and access any of the components inside the system. This warning applies to Dell™ PowerEdge™ servers and Dell PowerVault™ storage systems.**

This document pertains only to the Dell 2161DS-2/4161DS Console Switch. You should also read and follow the additional safety instructions contained elsewhere:

- The *Remote Console Switch Installation Guide* included with your rack solution that describes how to install your system into a rack.
- The User's Guide which provides information about setting up and operating your rack mounted server system.
- The *Avocent AutoView 1000R/2000R Installer/User's Guide* if applicable.

General

- Observe and follow service markings.
- Do not service any product except as explained in your system documentation.
- Opening or removing covers that are marked with the triangular symbol with a lightning bolt may expose you to electrical shock.
- Components inside these compartments should be serviced only by a trained service technician.
  - This product contains no serviceable components. Do not attempt to open.
- If any of the following conditions occur, unplug the product from the electrical outlet and replace the part or contact your trained service provider:
  - The power cable, extension cable, or plug is damaged.
  - An object has fallen into the product.
  - The product has been exposed to water.
  - The product has been dropped or damaged.
  - The product does not operate correctly when you follow the operating instructions.
- Keep your system away from radiators and heat sources. Also, do not block cooling vents.

- Do not spill food or liquids on your system components, and never operate the product in a wet environment. If the system gets wet, see the appropriate section in your troubleshooting guide or contact your trained service provider.

- Use the product only with approved equipment.

- Allow the product to cool before removing covers or touching internal components.

- Operate the product only from the type of external power source indicated on the electrical ratings label. If you are not sure of the type of power source required, consult your service provider or local power company.

⊃ **NOTICE:** To help avoid damaging your system, be sure the voltage selection switch (if provided) on the power supply is set for the voltage that most closely matches the AC power available in your location. Also be sure that your monitor and attached devices are electrically rated to operate.

- Be sure that your monitor and attached devices are electrically rated to operate with the power available in your location.

- Use only power cables provided with this product.

- To help prevent electric shock, plug the system and peripheral power cables into properly grounded electrical outlets. These cables are equipped with three-prong plugs to help ensure proper grounding. Do not use adapter plugs or remove the grounding prong from a cable.

- Observe extension cable and power strip ratings. Make sure that the total ampere rating of all products plugged into the power strip does not exceed 80 percent of the ampere ratings limit for the power strip.

- To help protect your system from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner, or uninterruptible power supply (UPS).

- Position system cables and power cables carefully. Route cables so that they cannot be stepped on or tripped over. Be sure that nothing rests on any cables.

- Do not modify power cables or plugs. Consult a licensed electrician or your power company for site modifications. Always follow your local/national wiring rules.

Rack Mounting of Systems

- Refer to the rack installation documentation accompanying the rack for specific caution statements and procedures.

- System rack kits are intended to be installed in a rack by trained service technicians. If a non-Dell rack is utilized, be sure that the rack meets the specifications of a Dell rack.

- Elevated Ambient Temperature: If installed in a closed rack assembly, the operation temperature of the rack environment may be greater than room ambient. Use care not to exceed the rated maximum ambient temperature of the unit.

- Reduced Air Flow: Installation of the equipment in a rack should be such that the amount of airflow required for safe operation of the equipment is not compromised.

- Mechanical Loading: Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

- Circuit Overloading: Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of circuits might have on overcurrent protection and supply wiring. Consider equipment nameplate ratings for maximum current.

- Reliable Earthing: Reliable earthing of rack mounted equipment should be maintained. Pay particular attention to supply connections other than direct connections to the branch circuit (for example, use of power strips).

LAN Options

- Do not connect or use during a lightning storm. There may be a risk of electrical shock from lightning.

- Never connect or use in a wet environment.

1

Product Overview

Features and Benefits

The multiuser, Dell™ 2161DS-2/4161DS Remote Console Switch integrates Dell field-proven digital keyboard, video and mouse (KVM) switching technology with advanced cable management, flexible access for up to four simultaneous users, and a patented, next-generation user interface. The Remote Console Switch features user-side USB and PS/2 ports that support major device platforms.

Using powerful on-screen management through the OSCAR® interface, the Remote Console Switch's graphical user interface (GUI), provides easy system configuration and device selection.

SIP Intelligent Module

The Remote Console Switch also provides SIP intelligent module capability. The SIP module with CAT 5 design dramatically reduces cable clutter, while providing optimal resolution and video settings. The built-in memory of the SIP module simplifies configuration by assigning and retaining unique device names and Electronic ID (EID) numbers for each attached device. The SIP module is powered directly from the device and provides Keep Alive functionality even if the Remote Console Switch is not powered.

Both PS/2 and USB SIP modules are available allowing direct KVM connectivity to devices. Each Remote Console Switch has up to 16 Analog Rack Interface (ARI) ports for connecting SIP modules.

Utilizing the SIP module, you can attach additional switches to expand your Remote Console Switch system. This flexibility allows you to add capacity as your data center grows.

Multiplatform Support

The Dell SIP modules are available for use with the Remote Console Switch support PS/2 and USB device environments. Using the OSCAR® GUI in conjunction with these modules allows you to switch easily across platforms.

Interoperability with Avocent® AVRIQ Intelligent Cabling

Avocent AVRIQ intelligent cable may also be used to connect devices to the Remote Console Switch. PS/2, USB, Sun, and serial cabling options are available. Please refer to the Avocent *AutoView 1000R/2000R Installer/User Guide* for more information.

OSCAR® GUI

The Remote Console Switch uses the OSCAR® interface, which features intuitive menus to configure your switch system and select computers. Devices can be identified by a name, EID or port number, allowing you to assign unique device names.

Security

The OSCAR® interface allows you to protect your system with a screen saver password. The screen saver mode engages and access is prohibited until the appropriate password is entered to reactivate the system. By typing **Help** in the password dialog, you are directed to Dell Technical Support.

Encryption

The Remote Console Switch supports DES, 3DES, and 128-bit SSL encryption of keyboard, video, and mouse sessions.

Operation Modes

The OSCAR® user interface provides convenient operation modes for easy system administration of the Remote Console Switch. These modes (Broadcast, Scan, Switch and Share) allow you to manage your switching activities. Chapter 3, "Basic Operations" on page 25 explains these modes in detail.

Video

The Remote Console Switch provides optimal resolution for analog VGA, SVGA and XGA video. You can achieve resolutions of 1024 x 768, depending on the length of cable separating your switch and servers.

Table 1-1.   Maximum Resolution Refresh Rate Video Type

720 x 400 @ 70 Hz VGA
640 x 480 @ 60 Hz VGA
640 x 480 @ 72 Hz VESA
640 x 480 @ 75 Hz VESA
800 x 600 @ 56 Hz VESA
800 x 600 @ 60 Hz VESA
800 x 600 @ 70 Hz VESA
800 x 600 @ 75 Hz VESA
1024 x 768 @ 60 Hz VESA
1024 x 768 @ 70 Hz VESA
1024 x 768 @ 75 Hz VESA

FLASH Upgradeable

Upgrade your Remote Console Switch and SIP modules at any time to ensure you are always running the most current firmware version available. Flash Upgrades can be initiated through OSCAR® or the Serial Console. The Remote Console Switch can be configured to perform automatic firmware upgrades of SIP modules. See "Appendix A: FLASH Upgrades" on page 45 for more information.

Cascade (Tier) Expansion

The Remote Console Switch features allow you to cascade additional Dell Console Switches from each of the Analog Rack Interface (ARI) ports on the switch. The cascaded switches are attached in the same manner as any device. This additional tier of units allows you to attach up to 256 servers in one system. See "Adding a Cascade Switch" on page 20.

2

Installation

The Remote Console Switch requires that the Remote Console Switch Software be installed prior to use. Remote Console Switch Software allows a user to view and control a device attached to the Remote Console Switch switch system, configure and maintain the system, and prevent unauthorized access to the Remote Console Switch via IP connection.

✐ **NOTE:** The analog port does not require the Remote Console Switch Software for operation. The analog port uses the On-Screen Configuration and Activity Reporting interface (OSCAR®). For more information, see "Basic Operations" on page 25.

The Remote Console Switch switch system uses Ethernet networking infrastructure and TCP/IP protocol to transmit keyboard, video, and mouse information between operators and connected computers. Although 10BaseT Ethernet or Gigabit may be used, Dell recommends a dedicated, switched 100BaseT network.

Getting Started

Before installing your Remote Console Switch, refer to the list below to ensure you have all items that shipped with the Remote Console Switch, as well as other items necessary for proper installation.

Supplied with the Remote Console Switch:

- Remote Console Switch unit
- Local country power cord
- OU mounting bracket
- 1U mounting bracket
- 1U mounting bracket hardware kit
- Serial cable
- Remote Console Switch Hardware and OSCAR® User's Guide on CD
- Remote Console Switch Software User's Guide on CD
- Remote Console Switch Installation Instructions

Additional items needed:

- One Server Interface Pod (SIP) or Avocent® AVRIQ module per attached device
- One CAT 5 patch cable per attached device (up to 30 meters)

Optional items:

- Port Expansion Module (PEM)
- Front Access Panel

Setting Up Your Network

The Remote Console Switch system uses IP addresses to uniquely identify the Remote Console Switch units and the computers running Remote Console Switch Software. The Remote Console Switch supports DHCP and static IP addressing. (If you are connecting your remote software to the previous a 2161DS, you will need to use BootP instead of DHCP).

Keyboards

USB or PS/2 type keyboards may be connected to the Analog Port of the Remote Console Switch.

✍ NOTE: The Remote Console Switch also supports the use of multiple keyboards and multiple mice on the Analog Port. The use of more than one input device simultaneously, however, may produce unpredictable results.

# Rack Mounting Your Remote Console Switch Unit

Obtain a Switch Mounting Bracket Kit (0U or 1U) to rack-mount your Remote Console Switch unit. Before installing the Remote Console Switch and other components in the rack, stabilize the rack in a permanent location. Start rack mounting your equipment at the bottom of the rack, then work to the top. Avoid uneven loading or overloading of racks.

⚠ CAUTION: Before installing systems in a rack, install front and side stabilizers on stand-alone racks or the front stabilizer on racks joined to other racks. Failure to install stabilizers accordingly before installing systems in a rack could cause the rack to tip over, potentially resulting in bodily injury under certain circumstances. Therefore, always install the stabilizer(s) before installing components in the rack.

To install the 0U switch mounting bracket (shipped as default):

1 Line up the holes of the mounting brackets with the screw holes in the switch.

2 Fasten the mounting bracket to the switch using the button head socket cap screws on each side.

3 Mount the switch assembly to the rack by inserting the three mounting hooks on one side of the bracket into square holes in the vertical rack.

4 Press down until the blue push button pops out and clicks.

Figure 2-1. 0U Mounting Bracket Installation
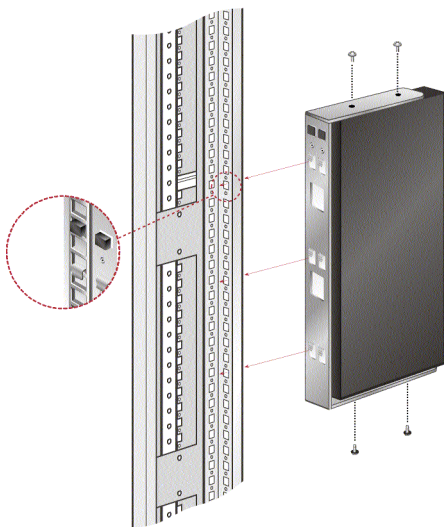

To install the 1U four point switch mounting bracket:

1 Remove the screws on each side of the 1U four-point switch and set them aside to attach to the front 1U bracket pieces later.

2 Line up the vent holes in the "long side" of the kit's front brackets with the vent holes in the switch.

3 Line up the screw holes in the bracket with the screw holes in the switch.

4 With a Phillips screwdriver, fasten the front mounting brackets to the switch using two screws on each side.

5 Attach four cage nuts or clip nuts to the rack mounting flange of the rack cabinet's front so that the nut is positioned on the inside of the rack.

6   Mount the switch assembly to the rack cabinet by matching the holes in the "short side" of each bracket to an appropriate set of matching holes on your rack cabinet. Next, insert the combination hex head screws through the slots in the bracket, then the holes in the mounting rail, and then into the cage nuts or clip nuts.

7   Attach four cage nuts or clip nuts to the rack mounting flange of the rack cabinet back so that the nut is positioned on the inside of the rack.

8   Slide the rear brackets into the channel of the front brackets adjusting them to fit the rack depth.

9   Mount the rear bracket to the rack cabinet by matching the holes in the "short side" of each bracket to an appropriate set of matching holes on your rack cabinet, ensuring the switch is level within the rack.

10   Insert the combination hex head screws through the slots in the bracket and the holes in the mounting rail, then into the cage nuts or clip nuts.
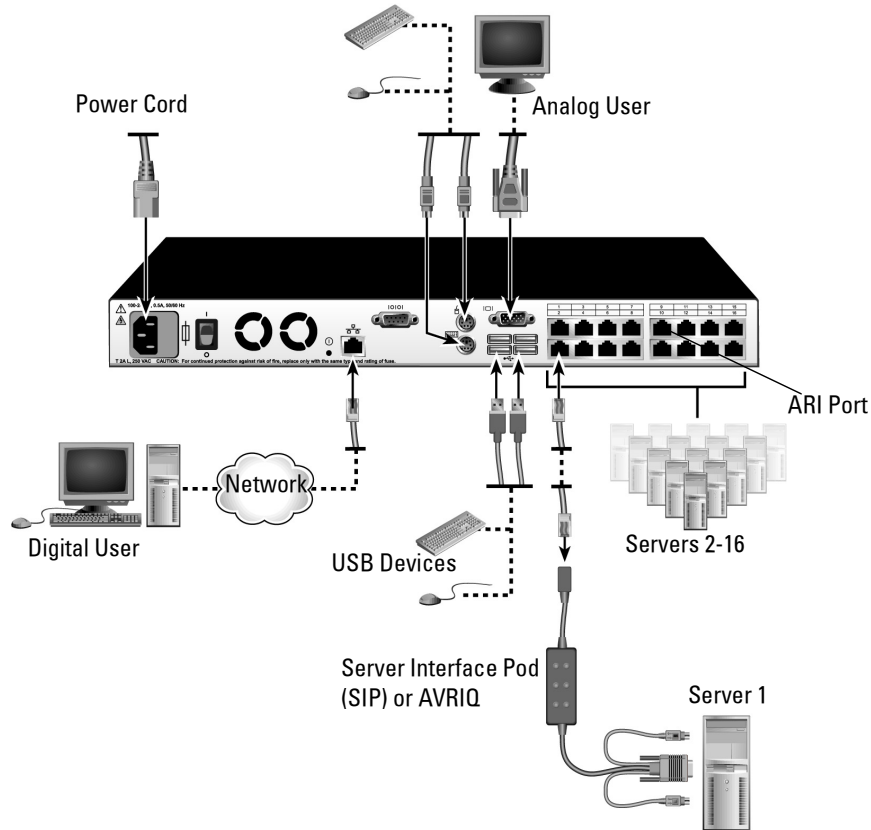
Figure 2-2.   1U Installation
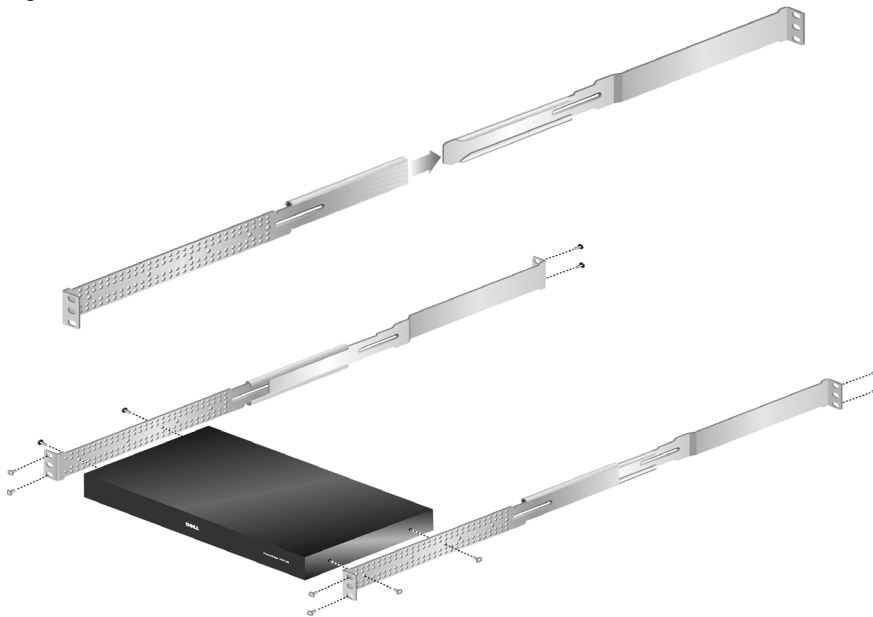
Installing the Remote Console Switch Unit

The diagram below illustrates one possible configuration for your Remote Console Switch appliance. Follow the detailed set of procedures following Figure 2-3 to successfully install your Remote Console Switch unit.

Figure 2-3.   Basic Remote Console Switch Configuration

⚠ **CAUTION: To reduce the risk of electric shock or damage to your equipment do not disable the power cord grounding plug. The grounding plug is an important safety feature. Plug the power cord into a grounded (earthed) outlet that is easily accessible at all times. Disconnect the power from the unit by unplugging the power cord from either the electrical outlet or the unit.**

✎ **NOTE:** If the building has 3-phase AV power, ensure that the computer and monitor are on the same phase to avoid potential phase-related video and/or keyboard problems.

✎ **NOTE:** The maximum supported cable length from switch to device is 30 meters.

To install the Remote Console Switch hardware:

✎ **NOTE:** The default OSCAR® User Name is "Admin." There is no default password.

 1 Connect a terminal or PC running the terminal emulation software to the configuration port on the back panel of the Remote Console Switch using the supplied serial cable. The terminal should be set to 9600 baud, 8 bits, 1 stop bit, no parity, and no flow control.

2 Plug the supplied power cord into the back of the Remote Console Switch unit and then into an appropriate power source.

3 When the power is switched on, the Power indicator on the rear of the unit will blink for 30 seconds while performing a self-test. Press the <Enter> key to access the main menu.

To configure the Remote Console Switch hardware:

1 You will see the **Terminal Applications** menu with six options. Select option 1, **Network Configuration**.

Figure 2-4.   Network Configuration Menu
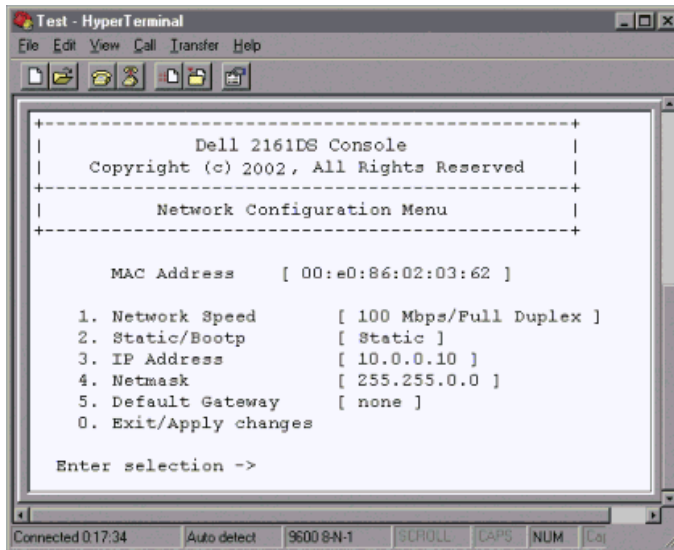
2 Select option 1 to set your network speed. Once you enter your selection, you will be returned to the **Network Configuration** menu.

3 Select option 2 and specify if you are using a static or DHCP IP address. Dell recommends using a static IP address for ease of configuration.

4 Select options 3-5 from the **Terminal Applications** menu, in turn, to finish configuring your Remote Console Switch for IP address, Netmask, and Default Gateway.

5 Once this is completed, type Ø to return to the main menu.

✏ **NOTE:** Network configuration can also be performed. See "Basic Operations" on page 25.

Video Optimization

To ensure optimal video quality, configure the Remote Console Switch with the same settings as the network switch. For example, if the Remote Console Switch is set to **Auto-Negotiate**, then the network switch must be set to **Auto-Negotiate** in both speed and duplex. For example, if the Remote Console Switch is set to 100MB - full duplex, then the network switch must be set to 100MB - full duplex.

Once you have made these changes, you may need to refresh/flush the Address Resolution Protocol (ARP) tables in the network before you establish a new connection with the Remote Console Switch, especially if the Remote Console Switch has been in use within the hour proceeding these changes.

To refresh the ARP table, do one of the following:

Wait approximately 10 minutes for the ARP tables to rebuild automatically.

-or-

Clear the ARP table entry in a video session viewer workstation and ping the appliance at its IP address. This can be done from a DOS window.

   a   Type ARP -d 1.2.3.4
        (where 1.2.3.4 is the IP address of the Remote Console Switch).

   b   Type PING 1.2.3.4

If the PING is successful, the Remote Console Switch is ready for operation.

> **NOTE:** For further information on refreshing the ARP table refer to the *Remote Console Switch Software User's Guide.*

Mouse Acceleration

> **NOTE:** Dell highly recommends that all Microsoft® Windows® systems attached to the Remote Console Switch use the default Windows® PS/2 or USB mouse driver.

If you are experiencing slow mouse response during a remote video session, deactivate mouse acceleration in the operating system of the target device and set mouse speed to 50%.

## Connecting a SIP

To connect a SIP to each server:

1 Locate the SIPs for your Remote Console Switch unit.

2 If you are using a PS/2 SIP connection, attach the SIP's color-coded ends to the appropriate keyboard, monitor, and mouse ports on the first server you will be connecting to this Remote Console Switch. If you are using a USB connection, attach the SIP's plug to the USB port on the first server you will be connecting to this Remote Console Switch unit (Figure 2-5).

3 To the RJ45 connector on the SIP, attach one end of the CAT 5 cabling that will run from your SIP to the Remote Console Switch unit (Figure 2-5).

4 Connect the other end of the CAT 5 cable to the desired Analog Rack Interface (ARI) port on the back of your Remote Console Switch unit.

5 Repeat steps 2-4 for all servers you wish to attach.

NOTE: Power down the Remote Console Switch unit before servicing. Always disconnect the power cord from the wall outlet. Power down the Remote Console Switch unit before servicing. Always disconnect the power cord from the wall outlet.

NOTE: In addition to Dell SIPs, the Remote Console Switch may also be connected to devices using Avocent AVRIQ's, including Sun and Serial AVRIQ's Network Configuration Menu.

Figure 2-5. Connecting a SIP
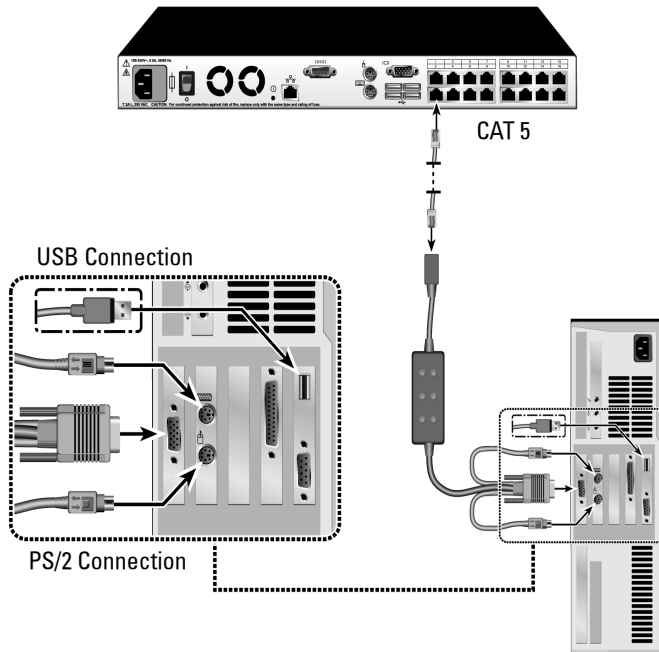
Adding a Cascade Switch

To add a cascade switch (optional):

NOTE: The Remote Console Switch does not support the EL80-DT.

1 Mount the switch into your rack. Locate a CAT 5 cable to connect your Remote Console Switch unit to the cascade switch (Figure 2-7).

2 Attach one end of the CAT 5 cabling to the ARI port on the Console Switch.

3 Connect the other end of the CAT 5 cable to the ACI port on the back of your cascade switch.

4 Connect the devices to your cascaded switch according to the switch manufacturer's recommendations.

5 Repeat steps 1-4 for all the cascade switches you wish to attach to your Remote Console Switch system.

Figure 2-6.   2161DS-2 or 4161DS With a Cat 5 Analog Switch
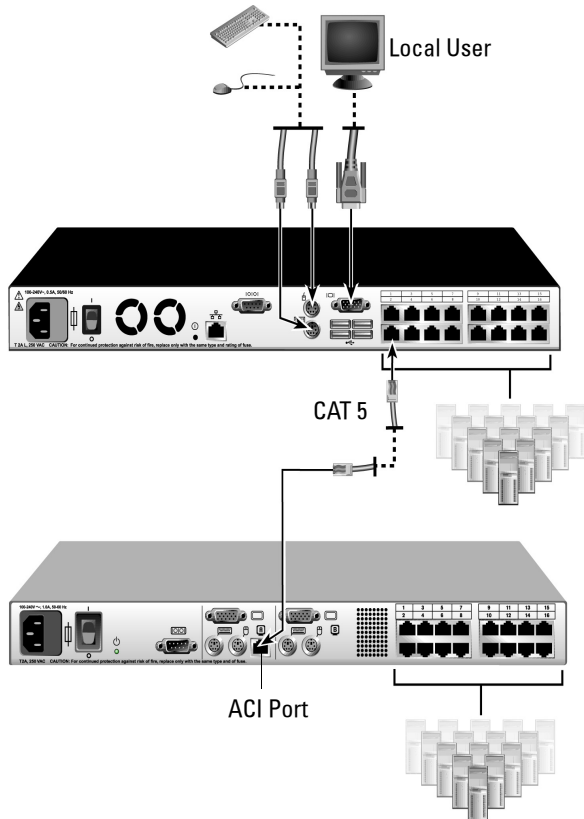
> **NOTE:** The Remote Console Switch supports only 1 switch per ARI port. You cannot cascade another switch under this first switch.

> **NOTE:** When cascading with a Remote Console Switch, an 8-port or 16-port analog console switch is not supported as the primary unit in a cascaded configuration. The Remote Console Switch must be the primary unit.

Cascading with Legacy Switches

To add a legacy switch (optional):

1 Mount the switch into your rack. Locate a CAT 5 cable to connect your Remote Console Switch unit to the legacy switch (Figure 2-7).

2 Attach one end of the CAT 5 cabling to the ARI port on the Console Switch.

3 Connect the other end of the CAT 5 cable to a Dell SIP or Avocent AVRIQ.

4 Connect the SIP or AVRIQ to your legacy switch according to the switch manufacturer's recommendations.

5 Repeat steps 1-3 for all the legacy switches you wish to attach to your Remote Console Switch system.

🖉 **NOTE:** The Remote Console Switch supports only 1 switch per ARI port. You cannot cascade another switch under this first switch.

🖉 **NOTE:** When cascading with a Remote Console Switch, an 8-port or 16-port analog console switch is not supported as the primary unit. The Remote Console Switch must be the primary unit.

Figure 2-7. Remote Console Switch Cascading Configuration With Legacy Console Switches
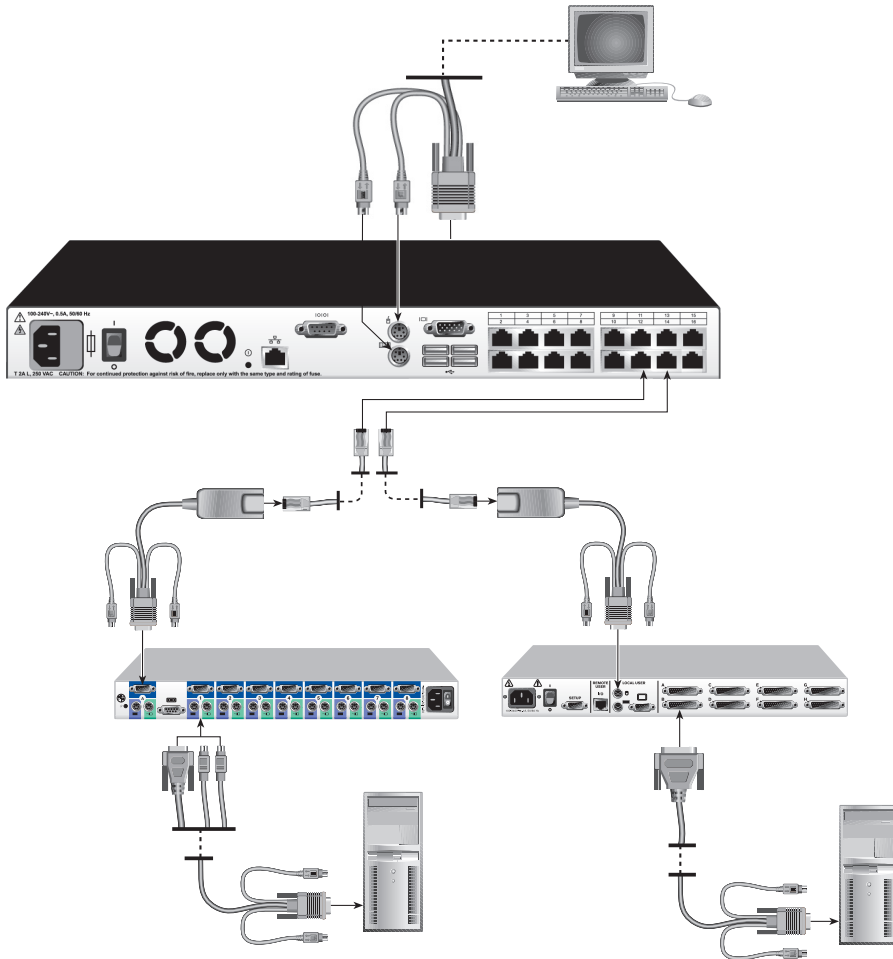
Adding a PEM (Optional)

A Port Expansion Module (PEM) allows you to expand each ARI port to accommodate up to eight devices instead of one.

✍ **NOTE:** The PEM operates passively. Therefore, once a user accesses a device attached to a PEM, any subsequent users attempting to access any of the devices attached to that PEM will be blocked.

To add a PEM (optional):

1 Mount the PEM into your rack. Using up to nine CAT 5 cables, one connects your Remote Console Switch unit to the PEM, and the other eight connect the PEM to the SIP attached to each device.

2 Attach one end of the CAT 5 cabling that will run between your PEM and the Remote Console Switch unit to the RJ45 connector slightly separate from the other connectors on the PEM. Connect the remaining end of the CAT 5 cable to the desired ARI port on the back of your Remote Console Switch unit.

3 To one of the eight RJ45 connectors grouped on the back of the PEM, attach the CAT 5 cabling that will run between your PEM and each device's SIP.

4 Connect the other end of the CAT 5 cable to the first of the SIPs.

5 Repeat steps 3-4 for all devices you wish to attach.

Figure 2-8.   Remote Console Switch Configuration With a PEM

ARI Port

CAT 5e

PEM

SIP or Avocent AVRIQ

Server
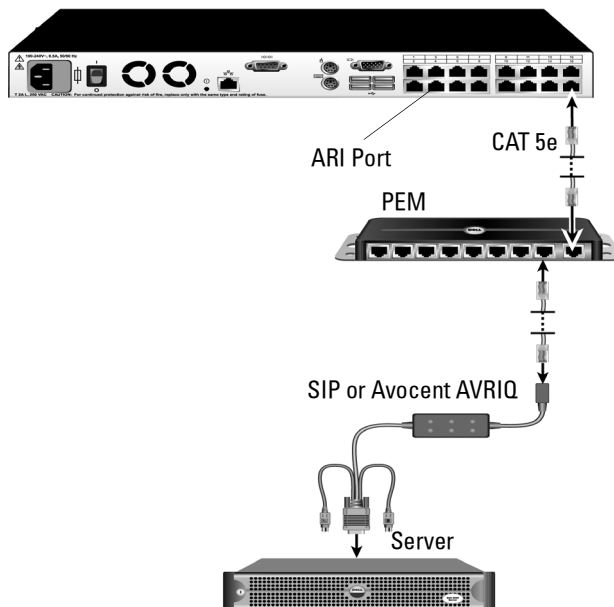
Connecting to the Network

To connect the network and power up your Remote Console Switch:

1 Connect your network cable to the LAN port on the rear of the Remote Console Switch to your network.

2 Power up all attached systems.

3 Attach your monitor and keyboard and mouse cable connectors to the appropriate ports on the back of your Remote Console Switch unit.

3

Basic Operations

Controlling Your System at the Analog Ports

The Remote Console Switch features user-side keyboard and mouse ports that allow you to connect a USB or PS/2 keyboard and mouse for direct analog access. The Remote Console Switch uses the powerful OSCAR® interface, which uses intuitive menus to configure your system and select computers.

Viewing and Selecting Ports and Devices

Use the OSCAR® Main dialog box to view, configure and control devices in the Remote Console Switch system. View your devices by name, port or by the unique Electronic ID number (EID) embedded in each SIP module. When you launch the OSCAR® interface for the first time, the default port list is the OSCAR® interface-generated list.

The Port column indicates the ARI port to which a device is connected. If you cascade a switch from the main Remote Console Switch, creating another tier, the port numbering displays the ARI port first, then the switch port to which the device is connected. For example, in Figure 3-1, devices 06-01, 06-02, 06-03, and 06-04 are connected to switches. The port numbering displays the ARI port first, then the switch port to which the device is connected. If you cascade a switch from a Port Expansion Module (PEM), you will also see multiple devices that show up on a single port.

To access the Main dialog box:

Press <Print Screen> to launch the OSCAR® interface. The **Main** dialog box displays.

Figure 3-1.   Example of a Main Dialog Box
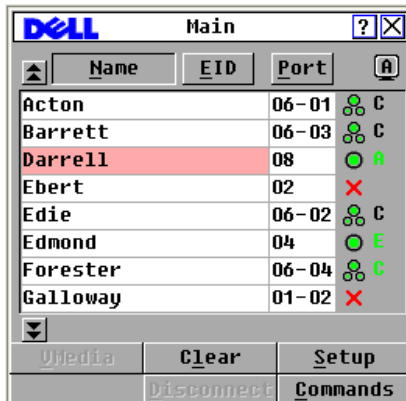
> **NOTE:** You can also press the <Control> key twice within one second to launch the OSCAR® interface. You can use this key sequence in any place you see <Print Screen> throughout this installer/user guide.

Viewing the status of your switch

The status of the devices in your system is indicated in the right columns of the **Main** dialog box. Table 3-1 describes the status symbols.

Table 3-1.   OSCAR® Interface Status Symbols

Symbol	Description
●	SIP is online.
✕	SIP is offline or is not operating properly.
⚇	Connected switch is online.
⚇	Connected switch is offline or is not operating properly.
●	SIP is being upgraded.
A	Indicates which user channel is currently connected to a SIP.

Selecting devices

Use the **Main** dialog box to select devices. When you select a device, the appliance reconfigures the keyboard and mouse to the proper settings for that device.

To select devices:

Double-click the device name, EID or port number.
or
If the display order of your device list is by port (**Port** button is depressed), type the port number and press <Enter>.
or
If the display order of your device list is by name or EID number (**Name** or **EID** button is depressed), type the first few characters of the name of the device or the EID number to establish it as unique and press <Enter>.

To select the previous device:

Press <Print Screen> and then <Backspace>. This key combination toggles between the previous and current connections.

To disconnect the user from a device:

Press <Print Screen> and then <Alt+0>. This leaves the user in a free state, with no device selected. The status flag on your desktop displays Free.

Soft Switching

Soft switching is the ability to switch devices using a hot key sequence. You can soft switch to a device by pressing <Print Screen> and then typing the first few characters of its name or number. If you have set a Screen Delay Time and you press the key sequences before that time has elapsed, the OSCAR® interface will not display.

To configure devices for soft switching:

1   Press <Print Screen> to launch the OSCAR® interface. The **Main** dialog box displays.

2   Click **Setup - Menu**. The **Menu** dialog box displays.

3   For **Screen Delay Time**, type the number of seconds of delay desired before the **Main** dialog box is displayed after you press <Print Screen>.

4   Click **OK**.

To soft switch to a device:

1   To select a device, press <Print Screen>. If the display order of your device list is by port (***Port*** button is depressed), type the port number and press <Enter>.
    or
    If the display order of your device list is by name or EID number (**Name** or **EID** button is depressed), type the first few characters of the name of the device or the EID number to establish it as unique and press <Enter>.

2   To switch back to the previous device, press <Print Screen> then <Backspace>.

Navigating the OSCAR® Interface

Table 3-2 describes how to navigate the OSCAR® interface using the keyboard and mouse.

Table 3-2. OSCAR® Interface Navigation Basics

This Keystroke	Does This
<Print Screen>, Ctrl-Ctrl, Shift-Shift and/or Alt-Alt	OSCAR® activation sequence. By default, <Print Screen> and Ctrl-Ctrl are set as the OSCAR® activation options. Shift-Shift and Alt-Alt must be set within OSCAR® before use.
<Print Screen>	Press <Print Screen> twice to send the <Print Screen> keystroke to the currently selected device.
F1	Opens the **Help** screen for the current dialog box.
Escape	Closes the current dialog box without saving changes and returns to the previous one. In the **Main** dialog box, it closes the OSCAR® interface and returns to the flag. In a message box, it closes the pop-up box and returns to the current dialog box.
Alt+Hotkey	Opens dialog boxes, selects or checks options and executes actions when used with underlined or other designated letters.
Alt+X	Closes the current dialog box and returns to the previous one.
Alt+O	Selects the **OK** button, then returns to the previous dialog box.
Click, Enter	In a text box, selects the text for editing and enables the **left-**and **right-arrow** keys to move the cursor. Press <Enter> again to quit the edit mode.
Enter	Completes a switch in the **Main** dialog box and exits the OSCAR® interface.
<Print Screen>, Backspace	Toggles back to previous selection.
<Print Screen>, Alt+0	Immediately disengages a user from a server; no server is selected. Status flag displays Free. (This only applies to the **0** on the keyboard and not the keypad.)
<Print Screen>, Pause	Immediately turns on screen saver mode and prevents access to that specific console, if it is password protected.
Up/Down Arrows	Moves the cursor from line to line in lists.
Right/Left Arrows	Moves the cursor between columns, or within the column when editing a text box.
Page Up/Page Down	Pages up and down through **Name** and **Port** lists and **Help** pages.
Home/End	Moves the cursor to the top or bottom of a list.
Delete	Deletes current selection in the scan list or characters in a text box.
Page Up/Page Down	Pages up and down through **Name** and **Port** lists and **Help** pages.
Numbers	Type from the keyboard or keypad.

Configuring OSCAR® Interface Menus

You can configure your Remote Console Switch from the **Setup** menu within the OSCAR® interface. Select the **Names** button when initially setting up your appliance to identify devices by unique names. Select the other setup features to manage routine tasks for your devices from the OSCAR® interface menu. See Table 3-3.

Table 3-3.   Setup Features to Manage Routine Tasks for Your devices

Feature	Purpose
Menu	Change the device listing between numerically by port or EID number and alphabetically by name. Change the **Screen Delay Time** before the OSCAR® interface displays after pressing <Print Screen>.
Security	Set passwords to restrict device access. Enable the screen saver.
Flag	Change display, timing, color or location of the status flag.
Language	Choose the language display.
Devices	Identify the appropriate number of ports on an attached cascaded switch.
Names	Identify devices by unique names.
Keyboard	Choose your keyboard country code.
Broadcast	Set up to simultaneously control multiple devices through keyboard and mouse actions.
Scan	Set up a custom scan pattern for up to 16 devices.
Switch	Choose the switch mode and the share mode time-out.
Network	Choose your network speed and configuration. Specify the IP Address, Netmask and Gateway for your system.

To access the Setup menu:

1 Use the OSCAR® activation sequence to launch the OSCAR® interface. The **Main** dialog box displays.

2 Click **Setup**. The **Setup** dialog box displays.

Figure 3-2.   Setup Dialog Box


Changing the Display Behavior

Use the **Menu** dialog box to change the display order of devices, set a **Screen Delay Time** for the OSCAR® interface, and change the OSCAR® launch sequence. The display order setting alters how devices display in several screens including the **Main**, **Devices** and **Broadcast** dialog boxes.

To access the Menu dialog box:

1   Click **Setup - Menu** in the **Main** dialog box. The **Menu** dialog box displays.

Figure 3-3.   Menu Dialog Box
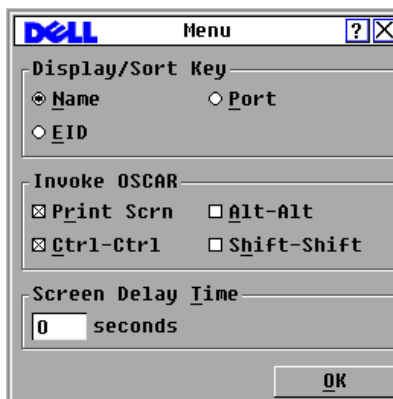
2   <Print Screen>, **Ctrl-Ctrl, Alt-Alt,** and **Shift-Shift** are selectable to launch the OSCAR® interface. One or all of the above keyboard combinations can be selected at a time. If only one keyboard combination is selected, it cannot be de-selected until a second one is chosen.

To choose the default display order of devices:

1   Select **Name** to display devices alphabetically by name.
or
Select **EID** to display devices numerically by EID number.
or
Select **Port** to display devices numerically by port number.

2   Click **OK**.

To set a Screen Delay Time for the OSCAR® interface:

1   Type in the number of seconds (0 to 9) to delay the OSCAR® interface display after you press <Print Screen>. Enter **0** to launch the OSCAR® interface without delay.

2   Click **OK**.

By setting a **Screen Delay Time**, you can complete a soft switch without displaying the OSCAR® interface. To perform a soft switch, see **Soft Switching** in this chapter.

Setting Console Security

The OSCAR® interface enables you to set security on your analog port console. You can establish a screen saver mode that engages after your console remains unused for a specified Inactivity Time. After it is engaged, your console remains locked until you press any key or move the mouse. You must type in your password to continue.

Use the **Security** dialog box to lock your console with password protection, set or change your password and enable the screen saver.

> *✍ NOTE:* If a password was previously set, you must enter the password before you can access the Security dialog box.

To access the Security dialog box:

1   Press <Print Screen> to launch the OSCAR® interface. The **Main** dialog box will appear.

2   Click **Setup - Security**. The **Security** dialog box displays.

Figure 3-4.   Security Dialog Box
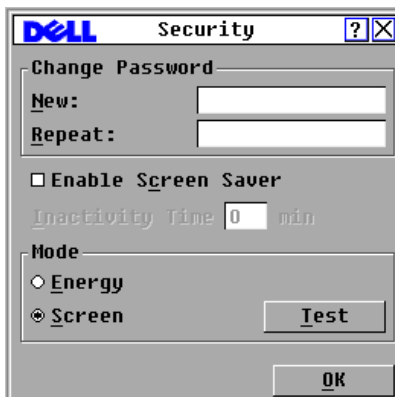
To set or change the password:

NOTE: If you lose or forget your password, please contact Dell Technical Support. See Appendix C: Technical Support for contact information.

1   Click and press <Enter> or double-click in the **New** text box.

2   Type the new password in the **New** text box and press <Enter>.
    Passwords must contain both alpha and numeric characters, are case sensitive and may be up to 12 characters long. Legal characters are: A to Z, a to z, 0 to 9, space and hyphen.

3   In the **Repeat** box, type the password again and press <Enter>.

4   Click **OK** to change only your password, and then close the dialog box.

To password protect your console:

1   Set your password as described in the previous procedure.

2   Select **Enable Screen Saver**.

3   Type the number of minutes for **Inactivity Time** (from 1 to 99) to delay activation of password protection and the screen saver feature.

4   For Mode, select **Energy** if your monitor is ENERGY STAR® compliant; otherwise select **Screen**.

CAUTION: Monitor damage can result from the use of Energy mode with monitors not compliant with Energy Star®.

5   (Optional) Click **Test** to activate the screen saver test, which lasts 10 seconds then returns you to the **Security** dialog box.

6   Click **OK**.

To log in to your console:

1   Press any key or move the mouse.

2   The **Password** dialog box displays. Type your password, then click **OK**.

3   The **Main** dialog box displays if the password was entered properly.

To remove password protection from your console:

1   From the **Main** dialog box, click **Setup - Security**; the **Password** dialog box displays. Type your password, then click **OK**.

2   In the **Security** dialog box, click and press <Enter> or double-click in the **New** box. Leave the box blank. Press <Enter>.

3   Click and press <Enter> or double-click in the **Repeat** box. Leave the box blank. Press <Enter>.

4   Click **OK** to eliminate your password.

To enable the screen saver mode with no password protection:

1   If your console does not require a password to gain access to the **Security** dialog box, proceed to step 2.
    or
    If your console is password protected, see the previous procedure, then go to step 2.

2   Select **Enable Screen Saver**.

3   Type the number of minutes for Inactivity Time (from 1 to 99) to delay activation of the screen saver.

4   Choose **Energy** if your monitor is ENERGY STAR® compliant; otherwise select **Screen**.

⚠ **CAUTION: Monitor damage can result from the use of Energy mode with monitors not compliant with Energy Star®.**

5   (Optional) Click **Test** to activate the screen saver test, which lasts 10 seconds then returns you to the **Security** dialog box.

6   Click **OK**.

📝 **NOTE:** Activation of the screen saver mode disconnects the user from a device; no device is selected. The status flag displays the status "Free."

To exit the screen saver mode:

Press any key or move your mouse. The **Main** dialog box displays and any previous device connection is restored after the password is validated by the appliance.

To turn off the screen saver:

1   In the **Security** dialog box, clear **Enable Screen Saver**.

2   Click **OK**.

To immediately turn on the screen saver:

Press <Print Screen>, then press <Pause>.

Controlling the Status Flag

The status flag displays on your desktop and shows the name or EID number of the selected device or the status of the selected port. Use the **Flag** dialog box to configure the flag to display by device name or EID number, or to change the flag color, opacity, display time and location on the desktop.

To access the Flag dialog box:

1   Press <Print Screen>. The **Main** dialog box will appear.

2   Click **Setup - Flag**. The **Flag** dialog box displays.

Figure 3-5.   Flag Dialog Box

To determine how the status flag is displayed:

1   Select **Name** or **EID** to determine what information will be displayed.

2   Select **Displayed** to show the flag all the time or select **Timed** to display the flag for only five seconds after switching.

3   Select a flag color in **Display Color**.

4   In **Display** Mode, select **Opaque** for a solid color flag or select **Transparent** to see the desktop through the flag.

5   To position the status flag on the desktop:

   a   Click **Set Position** to gain access to the **Set Position Flag** screen.

   b   Click on the title bar and drag to the desired location.

   c   Right-click to return to the **Flag** dialog box.

   ✎ **NOTE:** Changes made to the flag position are not saved until you click OK in the **Flag** dialog box.

6   Click **OK** to save settings.
   or
   Click **X** to exit without saving changes.

Setting the Interface Language

You can change the OSCAR® interface to any one of 4 supported languages by selecting your chosen language in the **Language** dialog box.

To change the OSCAR® interface language:

1   Press <Print Screen>. The **Main** dialog box will appear.

2   Click **Setup - Language**. The **Language** dialog box displays.

Figure 3-6.   Language Dialog Box

3   Click to select the language you want the OSCAR® interface to appear in.

4   Click **OK** to accept the change you have made and return to the **Setup** dialog box. The **Setup** dialog box displays in the language you have selected.

Assigning Device Types

The Remote Console Switch automatically discovers cascaded KVM switches, but you need to specify the number of ports on the cascaded switch through the **Devices** dialog box. An Sw-8 or Sw-24 in the **Type** category for the cascaded switch is visible on screen. When you select from the list, the **Modify** button displays, allowing you to assign it the appropriate number of ports.

📝 **NOTE:** The Modify button is available only if a configurable switch is selected.

To access the Server dialog box:

1   Press <Print Screen> to launch the OSCAR® interface. The **Main** dialog box displays.

2   Click **Setup - Devices**. The **Devices** dialog box displays.
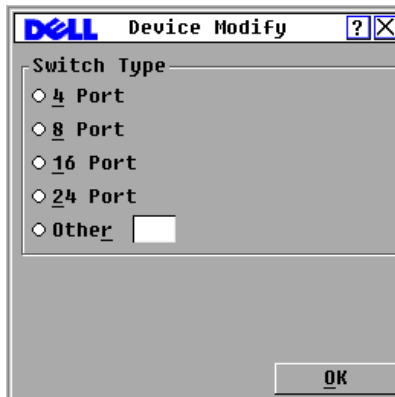
Figure 3-7.   Devices Dialog Box
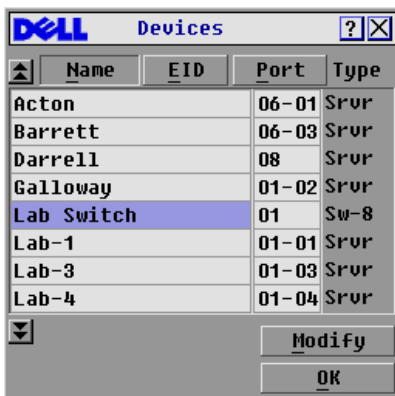
When the Remote Console Switch discovers a cascaded switch, the port numbering changes to accommodate each device under that switch. For example, if the switch is connected to ARI port 6, the switch port is listed as 06 and each device under it is numbered sequentially 06-01, 06-02 and so on.

NOTE: Changes made in the **Device Modify** dialog box are not saved until you click **OK** in the **Devices** dialog box.

To assign a device type:

1 In the **Devices** dialog box, select the desired port number.

2 Click **Modify**. The **Device Modify** dialog box displays.

Figure 3-8.   Device Modify Dialog Box

3 Choose or enter the number of ports supported by your cascaded switch and click **OK**.

4 Repeat steps 1 to 3 for each port requiring a device type to be assigned.

5 Click **OK** in the **Devices** dialog box to save settings.

Assigning Device Names

Use the **Names** dialog box to identify individual devices by name rather than by port number. The **Names** list is always sorted by port order. Names are stored in the SIP module, so even if you move the SIP/server to another ARI port, the name and configuration is recognized by the switch.

NOTE: If a device is turned off, the respective SIP module does not appear in the Names list.

To access the **Names** dialog box:

1 Press <Print Screen> to launch the OSCAR® interface. The **Main** dialog box will display.

2 Click **Setup - Names**. The **Names** dialog box displays.

NOTE: If the server list changes, the mouse cursor turns into an hourglass as the list is automatically updated. No mouse or keyboard input is accepted until the list update is complete.

NOTE: If a SIP module is not assigned a name, the EID is used as the default name.

To assign names to devices:

1 In the **Names** dialog box, select a device name or port number and click **Modify**. The **Name Modify** dialog box displays.

2 Type a name in the **New Name** box. Names of devices may be up to 15 characters long. Legal characters include: A to Z, a to z, 0 to 9, space and hyphen.

3 Click **OK** to transfer the new name to the **Names** dialog box. Your selection is not saved until you click **OK** in the **Names** dialog box.

4 Repeat steps 1 to 3 for each device in the system.

5 Click **OK** in the **Names** dialog box to save your changes.
or
Click **X** or press <Escape> to close the dialog box without saving changes.

Configuring Network Settings

You can change the network settings for your Remote Console Switch via the serial port or from the **Network** dialog box.

You can choose to assign a static IP address to the switch or where appropriate you can select the DHCP option to allow an IP address to be assigned dynamically by a DHCP server.

Figure 3-9. Network Dialog Box
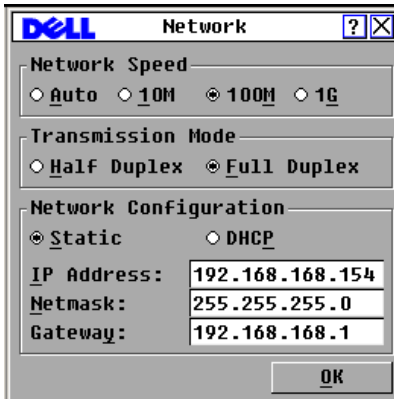
Once you have made changes to the network settings, click **OK** to return to the **Setup** dialog box.
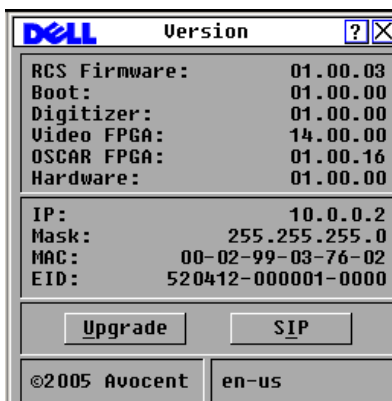
Displaying Version Information

The OSCAR® interface enables you to display the versions of the Remote Console Switch and the SIP module firmware. For optimum performance, keep your firmware current. For more information, see Appendix A: FLASH Upgrades.

To display version information:

1 Press <Print Screen>. The **Main** dialog box will appear.

2 Click **Commands - Display Versions**. The **Version** dialog box displays. The top half of the box lists the subsystem versions in the appliance.

Figure 3-10. Version Dialog Box

3 Click the **SIP** button to view individual SIP module version information.The SIP **Select** dialog box displays.

4 Select a SIP module to view and click the **Version** button. The **SIP Version** dialog box displays. For more information on loading firmware, see Appendix A.

5 Click X to close the **SIP Version** dialog box.

Scanning Your System

In scan mode, the appliance automatically scans from port to port (device to device). You can scan up to 16 devices, specifying which devices to scan, and the number of seconds that each device displays. The scanning order is determined by placement of the device in the list. The list is always shown in scanning order. You can, however, choose to display the device name or EID number by pressing the appropriate button.

To add devices to the scan list:

1 If the OSCAR® interface is not open, press <Print Screen>. The **Main** dialog box appears.

2 Click **Setup - Scan**. The **Scan** dialog box displays.

Figure 3-11. Scan Dialog Box
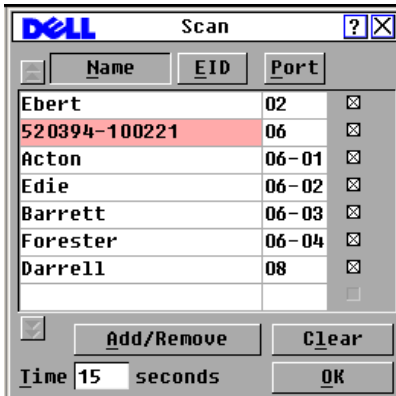
3   The dialog box contains a list of all devices attached to your appliance. Click the checkbox next to the devices you wish to scan.
or
Double-click on a device name or port.
or
Press <Alt> and the number of the device you wish to scan. You can select up to 16 devices from the entire list.

4   In the **Time** box, type the number of seconds (from 3 to 99) of desired time before the scan moves to the next device in the sequence.

5   Click **OK**.

To remove a device from the scan list:

1   In the **Scan** dialog box, select the device to be removed.
or
Double-click on the device name or port.
or
Click the **Clear** button to remove all devices from the scan list.

2   Click **OK**.

To start the scan mode:

1   If the OSCAR® interface is not open, press <Print Screen>**.** The **Main** dialog box appears.

2   Click **Commands**. The **Commands** dialog box displays.

3   Select **Scan Enable** in the **Commands** dialog box.

4   Click **X** to close the **Commands** dialog box.

 NOTE: Scanning begins when the Main dialog box or flag is displayed. Scanning is inhibited in any other OSCAR® interface dialog box.

NOTE: If the **Add/Remove** button is clicked when a device is highlighted, the check box corresponding to the highlighted device toggles state.

To cancel scan mode:

1 Select a device if the OSCAR® interface is open.
or
Move the mouse or press any key on the keyboard if the OSCAR® interface is not open. Scanning stops at the currently selected device.
or
Press <Print Screen>. The **Main** dialog box will appear.

2 Click **Commands**. The **Commands** dialog box displays.

3 Clear **Scan Enable**.

Setting the Preemption Warning

Administrators and users with certain access rights can preempt (disconnect) KVM sessions and take control of the target device. You can choose whether or not to warn the first user that the session will be preempted and specify how long the appliance will wait for the first user to respond to the warning.

To view or change the preemption warning settings, complete the following steps:

1 Press Print Screen. The Main window opens.

2 Click **Setup > Preempt**.

3 Enter a number of seconds in the **Timeout Seconds** field.

- If you enter a value of 0 to 4 seconds, the first user will not be warned before the session is preempted.

- If you enter a value of 5 to 120 seconds, the first user will be warned and will be allowed to continue using the target device for up to the amount of time in the **Timeout Seconds** field. The session will be preempted when the user clicks **OK**, or when the specified time elapses.

Figure 3-12.   Scan Dialog Box
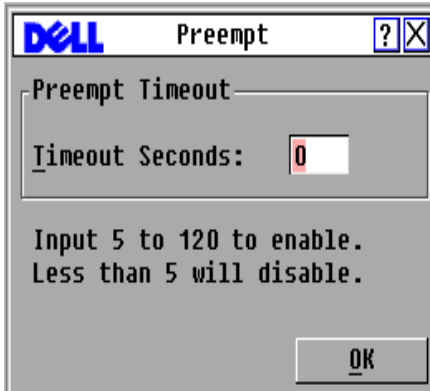
4 Click **OK** to save the settings.

Displaying Configuration Information

You can view the configuration of your Remote Console Switch from the **Configuration** dialog box. This dialog box provides you with quick access to the settings you have entered and allows you to add additional features by clicking the **Licence Key** button and typing the licence key for any additional features.

📝 **NOTE:** If there are no features that require a licence in the firmware, the button is grayed out.

To view system configuration:

1 Press <Print Screen>. The **Main** dialog box will appear.

2 Click **Configuration**. The **Configuration** dialog box is displayed.

3 Click **Licence Key** to add a licence key and enable a new feature or click **X** to close the **Configuration** dialog box and return to the **Setup** dialog box.

Running System Diagnostics

You can validate the integrity of your system through the **Run Diagnostics** command. This command checks the main board functional subsystems (memory, communications, switch control and the video channels) for each system controller. When you select the **Run Diagnostics** option, you receive a warning indicating that all users (remote and local) will be disconnected. Click **OK** to confirm and begin the test.

The **Diagnostics** dialog box displays. The top section of the dialog box displays the hardware tests. The bottom portion divides the tested SIP modules into three categories: On-line, Offline or Suspect.

📝 **NOTE:** A SIP module may appear to be offline while it is being upgraded.

Figure 3-13.   Diagnostics Dialog Box
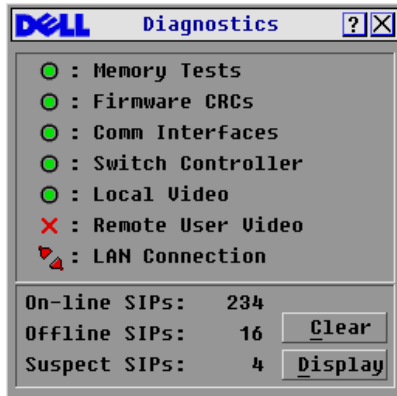
As each test is finished, a pass (green circle) or fail (red x) symbol displays to the left of each item as that test finishes. The following table details each of the tests.

Table 3-4.   Diagnostic Test Details

Test	Description
Firmware CRCs	Reports on the condition of the main board RAM
Remote User Video	Reports on whether a digital video connection has been made to a digital device
On-line SIP modules	Indicates the total number of currently connected and powered SIP modules
Offline SIP modules	Indicates the number of SIP modules that were connected successfully in the past and are turned off
Suspect SIP modules	Indicates the number of SIP modules that were detected, but are either unavailable for connection or dropped packets during the ping tests

To run diagnostic tests:

1   If the OSCAR® interface is not open, press <Print Screen>. The **Main** dialog box will appear.

2   Click **Commands - Run Diagnostics**. A warning message displays indicating that all users will be disconnected.

3   Click **OK** to begin diagnostics.
    or
    Click **X** or press <Escape> to exit the dialog box without running a diagnostic test.

4   All users are disconnected and the **Diagnostics** dialog box displays.

5   As each test is finished, a pass (green circle) or fail (red x) symbol displays. The test is complete when the last test's symbol displays.

Broadcasting to Servers

The analog user can simultaneously control more than one server in a system to ensure that all selected servers receive identical input. You can choose to broadcast keystrokes and/or mouse movements independently.

✎ **NOTE:** You can broadcast up to 16 devices at a time, one device per ARI port.

✎ **NOTE: Broadcasting Keystrokes** - The keyboard state must be identical for all devices receiving a broadcast to interpret keystrokes identically. Specifically, the <Caps Lock> and <Num Lock> modes must be the same on all keyboards. While the appliance attempts to send keystrokes to the selected devices simultaneously, some devices may inhibit and thereby delay the transmission.

✎ **NOTE: Broadcasting Mouse Movements** - For the mouse to work accurately, all systems must have identical mouse drivers, desktops (such as identically placed icons) and video resolutions. In addition, the mouse must be in exactly the same place on all screens. Because these conditions are extremely difficult to achieve, broadcasting mouse movements to multiple systems may have unpredictable results.

To access the Broadcast dialog box:

1 Press <Print Screen>. The **Main** dialog box appears.

2 Click **Setup - Broadcast**. The **Broadcast** dialog box displays.

Figure 3-14.   Broadcast Dialog Box
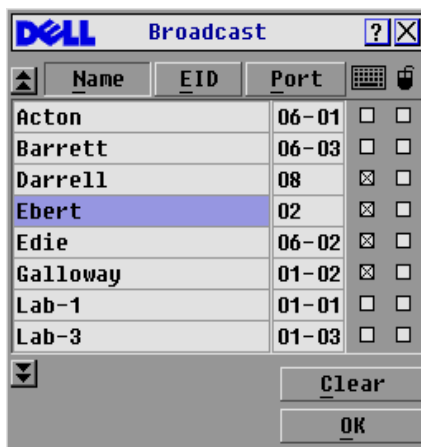
To broadcast to selected devices:

1 From the **Broadcast** dialog box, select the mouse and/or keyboard checkboxes for the devices that are to receive the broadcast commands.
or
Press the *up-arrow* or *down-arrow* keys to move the cursor to the target device. Then press **<Alt+K>** to select the keyboard checkbox and/or **<Alt+M>** to select the mouse checkbox. Repeat for additional devices.

2 Click **OK** to save the settings and return to the **Setup** dialog box. Click **X** or press <Escape> to return to the **Main** dialog box.

3 Click **Commands**. The **Commands** dialog box displays.

4 Click the **Broadcast Enable** checkbox to activate broadcasting. The **Broadcast Enable Confirm/Deny** dialog box displays.

5 Click **OK** to enable the broadcast. Click **X** or press <Escape> to cancel and return to the **Commands** dialog box.

6 If broadcasting is enabled, type the information and/or perform the mouse movements that you would like to broadcast from the user station. Only devices in the list are accessible.

✍ **NOTE:** Any other user is disabled when broadcast mode is enabled.

To turn broadcasting off:

From the **Commands** dialog box, clear the **Broadcast Enable** checkbox.

A

Appendix A: FLASH Upgrades

Upgrading the 2161DS-2/4161DS Remote Console Switch

The Remote Console Switch FLASH upgrade feature allows you to update your appliance with the latest firmware available.

You can upgrade the switch firmware either through a serial console or directly in OSCAR®.

> ✐ **NOTE:** If the **Enable SIP Autoupdate** option is selected, all attached Server Interface Pods (SIPs) are automatically upgraded when the appliance firmware is upgraded. For Information about enabling and disabling the **Enable SIP Autoupdate** option, see "Upgrading the SIP module firmware" on page 47.

Upgrading Firmware Using a Serial Console

Items needed for the upgrade:

- Server running serial terminal application
- Available serial port (COM port) on the server
- Serial cable
- Firmware update

To upload a new FLASH file:

> ⚠ **CAUTION: The Remote Console Switch begins the FLASH upgrade process. On screen indicators display the upgrade process. When the upload is complete, the switch resets and upgrades the internal sub-systems.**

1 Connect a terminal or PC running terminal emulation software to the configuration port on the back panel of the Remote Console Switch. The terminal should be set to 9600 bps, 8 bits, 1 stop bit, no parity and no flow control.

2 Connect the LAN port on the Remote Console Switch to an Ethernet hub that is also connected to the PC being used as the TFTP server.

3 Launch both the server TFTP software and the terminal emulation software.

4 Verify that the Remote Console Switch is turned on. After approximately 40 seconds, the Remote Console Switch sends a message, **Dell Remote Console Switch Ready ... Press any key to continue**. Press any key to access the main menu. The Remote Console Switch main menu appears.

5 Get the IP address of the TFTP server.

6 Assign the IP address in the Remote Console Switch, if needed:

   a In the **HyperTerminal** window, type 1 to select Network Configuration.

   b Note the Remote Console Switch IP address. The first three numbers must be the same as in the server IP address from step 5. The last number must be different. If the Remote Console Switch IP address is not correct, change it as follows: type 3 to select IP address, then enter the correct address.

   c Type 0 to exit the **Network Configuration** menu. If you changed the IP address, follow the directions on the screen.

7 From the main menu, type 2 to select Firmware Management. The current version of your firmware displays in the Firmware Management screen.

8 From the **Firmware Management** menu, type 1 to select FLASH Download.

9 Type the IP address of the TFTP server and press <Enter>.

10 Type the name of the FLASH file and press <Enter>.

11 Confirm the TFTP download by typing y or yes and pressing <Enter>.

12 The Remote Console Switch verifies the file you downloaded is valid. You are prompted to confirm the upgrade. Type y or yes and <Enter>.

13 The Remote Console Switch will begin the FLASH upgrade process. On screen indicators displays the upgrade process. When the upload is complete, the AutoView 2020/2030 switch resets and upgrades the internal subsystems.

14 When the upgrade is complete, the startup message from step 4 appears on the terminal screen.

Upgrading Appliance Firmware in OSCAR®

You can upgrade the appliance firmware version directly from the OSCAR® interface. To do this you need to know the IP address of the TFTP server, you need to know the filename of the firmware FLASH file, and you need to make sure that the file is in the TFTP folder.

To upgrade the appliance firmware:

1 Press <Print Screen>. The **Main** dialog box displays.

2 Click **Commands - Display Versions.** The **Versions** dialog box displays.

3 Click **Upgrade.** The **Download** dialog box is displayed.

Figure A-1. Download Dialog Box
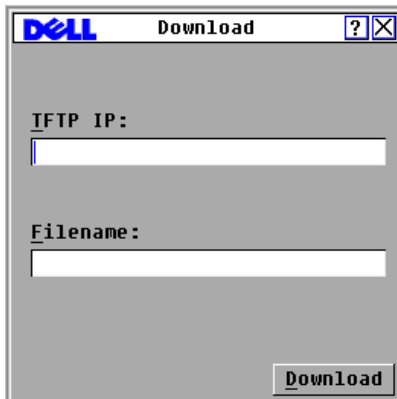
4   In the **TFTP IP** field, type the IP address of the TFTP server where the appliance firmware FLASH file is located.

5   In the **Filename** field, type the filename of the firmware FLASH file.

6   Click **Download.** The firmware upgrade proceeds.

7   Once the firmware upgrade has completed, the **Upgrade** dialog box is displayed.

Upgrading the SIP module firmware

The SIP modules can be upgraded individually or simultaneously.

To simultaneously upgrade multiple SIP modules:

1   Press <Print Screen>. The **Main** dialog box displays.

2   Click **Commands - SIP Status**. The **SIP Status** dialog box displays.

✍ NOTE: When the **Enable SIP Autoupdate** option is enabled in the **SIP Status** dialog box, SIP firmware is automatically upgraded when the appliance firmware is upgraded or when a new SIP is discovered by the appliance after an appliance firmware upgrade. SIPs that have already been discovered but which are not attached to the appliance during the appliance firmware upgrade must be upgraded manually.

Figure A-2.   SIP Status Dialog Box
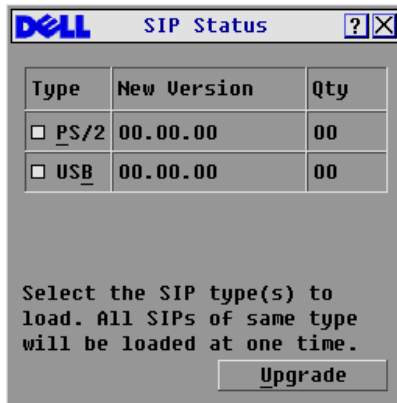
3   Click one or more types of modules to upgrade. Click **Upgrade**.

4   The **SIP Upgrade** dialog box displays. Click **OK** to initiate the upgrade and return to the **SIP Status** dialog box.

To upgrade SIP module firmware individually:

1   Press <Print Screen>. The **Main** dialog box will appear.

2   Click **Commands - Display Versions**. The **Version** dialog box displays.

Figure A-3.   Version Dialog Box
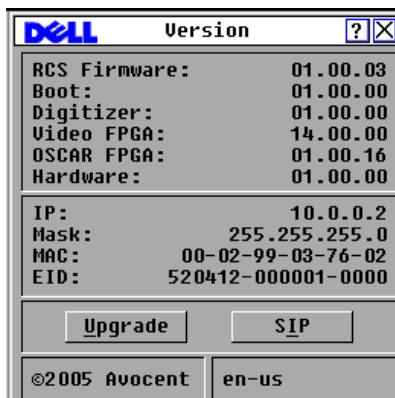
3   Click **SIP** to view individual SIP module version information. The **SIP Select** dialog box displays.

4   Select a SIP module to upgrade and click the **Version** button. The **SIP Version** dialog box displays.

5   Click the **Load Firmware** button. The **SIP Load** dialog box displays.

6   Click **OK** to initiate the upgrade and return to the **Status** dialog box.

NOTE: During an upgrade, the SIP status indicator in the **Main** dialog box is yellow. The SIP module is unavailable while an upgrade is in progress. When an upgrade is initiated, any current connection to the server via the SIP module is terminated.

NOTE: If you wish to return a SIP to its factory settings, click SIP in the **Version** dialog box. The SIP Version dialog box displays. Click **Decommission** and then **OK** to restore factory defaults to the SIP.

B

Appendix B: Technical Specifications

Table B-1.   Product Specifications

Remote Console Switch Product Specifications	
Server Ports	
Number	16
Types	Dell PS/2 and USB SIP modules. Avocent PS/2, USB, Sun and serial AVRIQ's.
Connectors	RJ-45
Sync Types	Separate horizontal and vertical
Plug and Play	DDC2B
Video Resolution	Analog Port Maximum 1280 x 1024 @ 75 Hz
Network Configuration Port	
Number	1
Type	Serial RS-232
Connector	DB9 Female
Analog Port Sets	
Number	1
Type	PS/2, USB, VGA and ACI
Connectors	PS/2 miniDIN, 15 pin D, RJ-45
Dimension	
Dimensions (H x W x D)	4.45 x 43.18 x 27.94 cm 1U form factor (1.75 x 17.00 x 11.00 in.)
Weight	3.6 kg (8 lb) without cables
Heat Dissipation	92 BTU/Hr
Airflow	8 cfm
Power Consumption	12.5 W
AC-input power	40 W maximum

Table B-1.   Product Specifications

Remote Console Switch Product Specifications	
AC-input voltage rating	100 to 240 VAC Autosensing
AC-input current rating	0.5 A
AC-input cable	18 AWG three-wire cable, with a three-lead IEC-320 receptacle on the power supply end and a country or region dependent plug on the power resource end
AC-frequency	50/60 HZ
Temperature	0º to 50º Celsius (32º to 122º Fahrenheit) operating -20º to 60º Celsius (-4º to 140º Fahrenheit) nonoperating
Humidity	20 to 80% noncondensing operating 5 to 95% noncondensing nonoperating
Safety and EMC Approvals and Markings	
	UL, FCC, cUL, ICES, CE, N, GS, IRAM, GOST, VCCI, MIC, C-Tick, PSB

C

Appendix C: Technical Support

Our Technical Support staff is ready to assist you with any installation or operating issues you encounter with your Dell product. If an issue should develop, follow the steps below for the fastest possible service.

To resolve an issue:

1   Check the pertinent section of this manual to see if the issue can be resolved by following the procedures outlined.

2   Check our web site at www.dell.com/support to search the knowledge base or use the on-line service request.

3   Call the Dell Technical Support location nearest you.

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